

Homestake Mining Company Site

Update for Katie Richardson
Senator Heinrich's Office

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March 8, 2016

Presentation Outline

- EPA/NRC/DOE Responsibilities
- Background Groundwater Issue
- Planned Work and Outreach in 2016
- Path Forward Schedule
- Next Steps

Responsibilities For Uranium Milling Facilities

EPA - NRC - DOE

- NRC
 - Regulatory Agency (1978 Uranium Mill Tailing Radiation Control Act)
 - Licenses Closure of Inactive Milling Sites
 - National Closure Standards
 - Soil Concentrations
 - Building Standards
 - Air (Radon) Standards
 - Ground Water Standards (or Background or Alternate Limit)
- EPA
 - Remedial Agency (1980 Superfund Law)
 - Unique, Site-specific Remedies Based on:
 - Technical Evaluation of Nature and Extent of Contamination (Remedial Investigation [RI])
 - Risk Assessment
 - Evaluation of Feasible Cleanup Options (Feasibility Study [FS])
 - Public Input on Proposed Plan for Cleanup
 - Record of Decision
- DOE
 - Long-term Custodian of Site After:
 - NRC Closure License is Terminated
 - EPA ROD is Satisfied

Responsibilities (Cont.)

EPA, NRC, DOE History at Homestake

1958 to 1990 – Homestake milling operations

1976 – Ground water (GW) contamination discovered, private wells impacted

1983 – Site added to NPL due to leaking impoundments

1985 – EPA persuades Homestake to pay for residential hook-ups to municipal water supply (large risk reduction)

- Includes paying 10 years of water usage

1986 – NRC assumes regulatory authority for closure at request of NM

1989 – EPA issues No-Action ROD for off-site radon in residential subdivisions

1993 – EPA/NRC Memorandum of Understanding

- NRC lead for reclamation/closure and GW corrective action
- EPA to provide consultation and review throughout rec/closure and GW corrective action
- If EPA determines that NRC-led actions do not, or will not, result in CERCLA quality cleanup, EPA may take whatever actions deemed appropriate to achieve requirements

2006 – NRC approves Homestake background GW levels and establishes levels as GW protection standards; EPA and State agree

- Background levels for uranium and selenium are 5 times higher than federal drinking water standards

Responsibilities (Cont.)

EPA, NRC, DOE History at Homestake

2010 – Community concerned about risk and slow pace, off-site disposal option considered

2012 – EPA determines that to ensure CERCLA-quality cleanup, and justify site delisting, must perform RI/FS and issue ROD on remedy

- EPA determines that ROD and NRC closure license need to be completed in parallel
- EPA requests Homestake evaluate corrective action for equivalency with RI/FS process; Homestake agrees

2014– EPA issues risk assessment for air (radon)

2014 – Homestake submits draft RI Report

- BVDA provides historic GW data to EPA and challenges background levels
- EPA initiates reassessment of background

2015 – BVDA hires hydrogeologist (Dr. Meyer) to study background

- BVDA presents Dr. Meyer's report to EPA in March, report proposes alternate theory on background
- BVDA requests EPA hire third party to review report
- EPA agrees and engages US Geological Survey
- EPA meets with BVDA to discuss USGS findings in August
 - USGS considers Dr. Meyer's theory to have merit, but recommends additional testing to verify or disprove
- EPA meets with Homestake to request additional GW data in October

***Risk from Ambient Air
Background Radon
Levels Slightly
Above EPA Acceptable
Risk Range***

Site Location

San Mateo Creek Basin

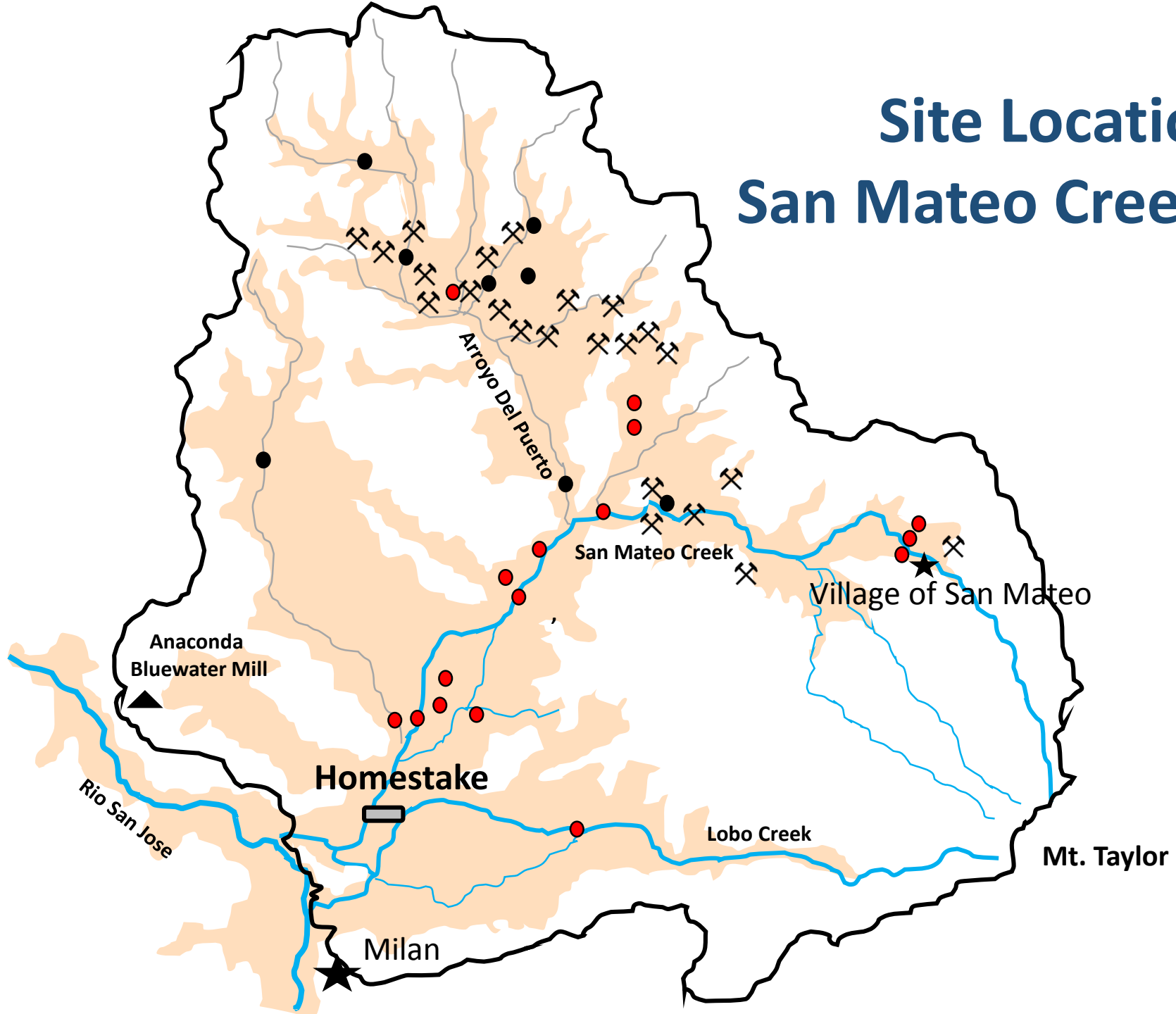
● Existing Monitoring Well

● Dry Borehole

⌵ Wet Mine

■ Alluvium

Not to Scale



Homestake NPL Site

Evaporation
Pond 3

Large Tailing Pile

Evaporation
Ponds 1& 2

Small Tailing Pile

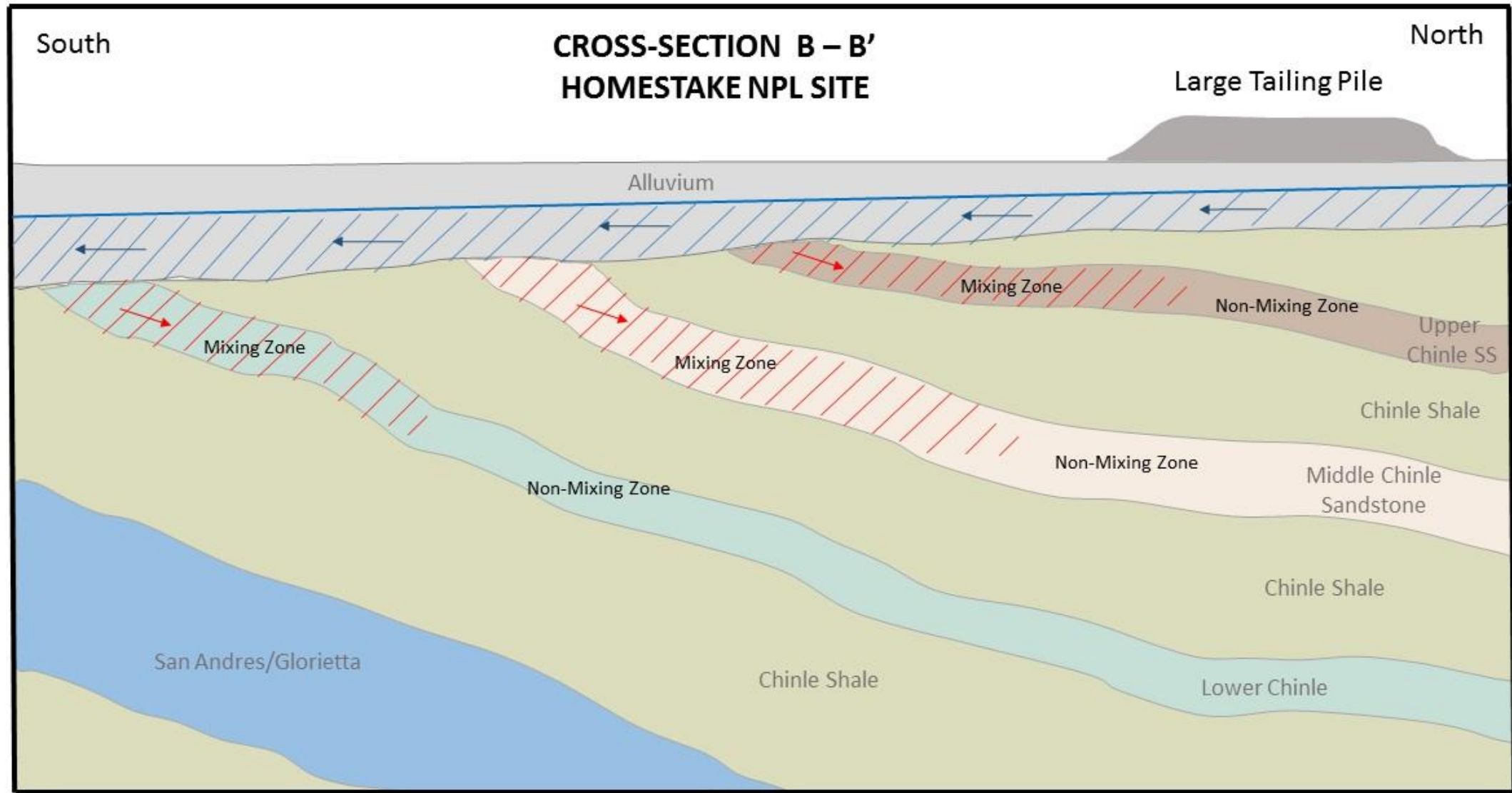
SUBDIVISIONS WITHIN A MILE
SOUTH OF IMPOUNDMENTS

CONTAMINATION OF PRIVATE WATER WELLS

Discovered in late 1970s

Municipal Water Supply Provided in early-1980s

Multiple Aquifers Impacted



BACKGROUND GROUND WATER ISSUES

Definition of Background:

Ground Water quality not impacted by Site contamination

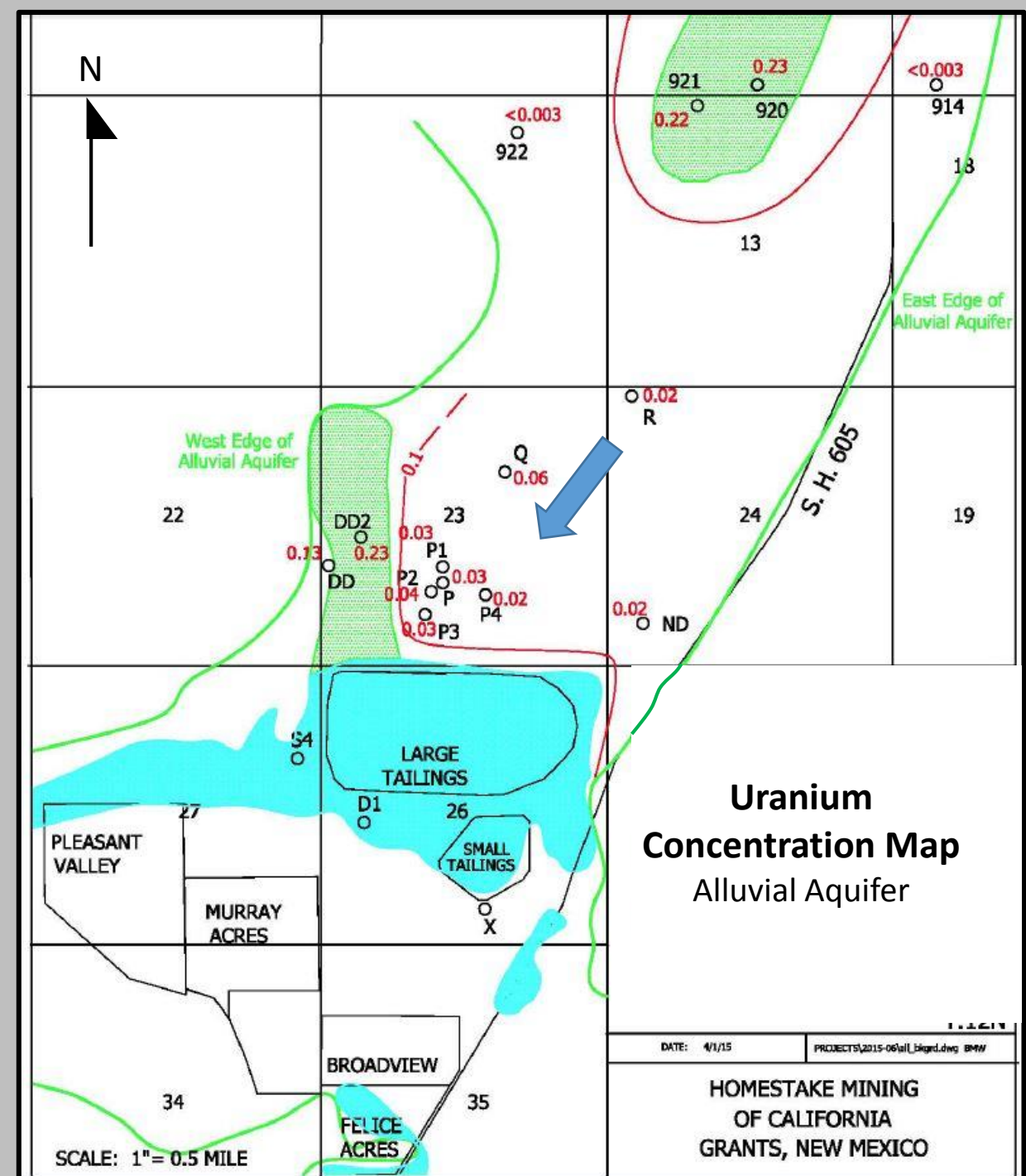
- EPA is Reassessing Background
 - Based partly on historical data from BVDA
 - USGS providing technical support
- Several Issues Raised by EPA
- EPA Discussed Issues with Other Stakeholders in 2015
- EPA Plans to Collect Additional Data

Background Levels Selected As Cleanup Levels by NRC

Background Levels Exceed Federal Drinking Water Standards

ISSUE WITH HIGH URANIUM IN BACKGROUND WELLS

- High Uranium Levels – Homestake
 - High Uranium Levels –
Upgradient of Homestake
 - Ground Water Flow Direction



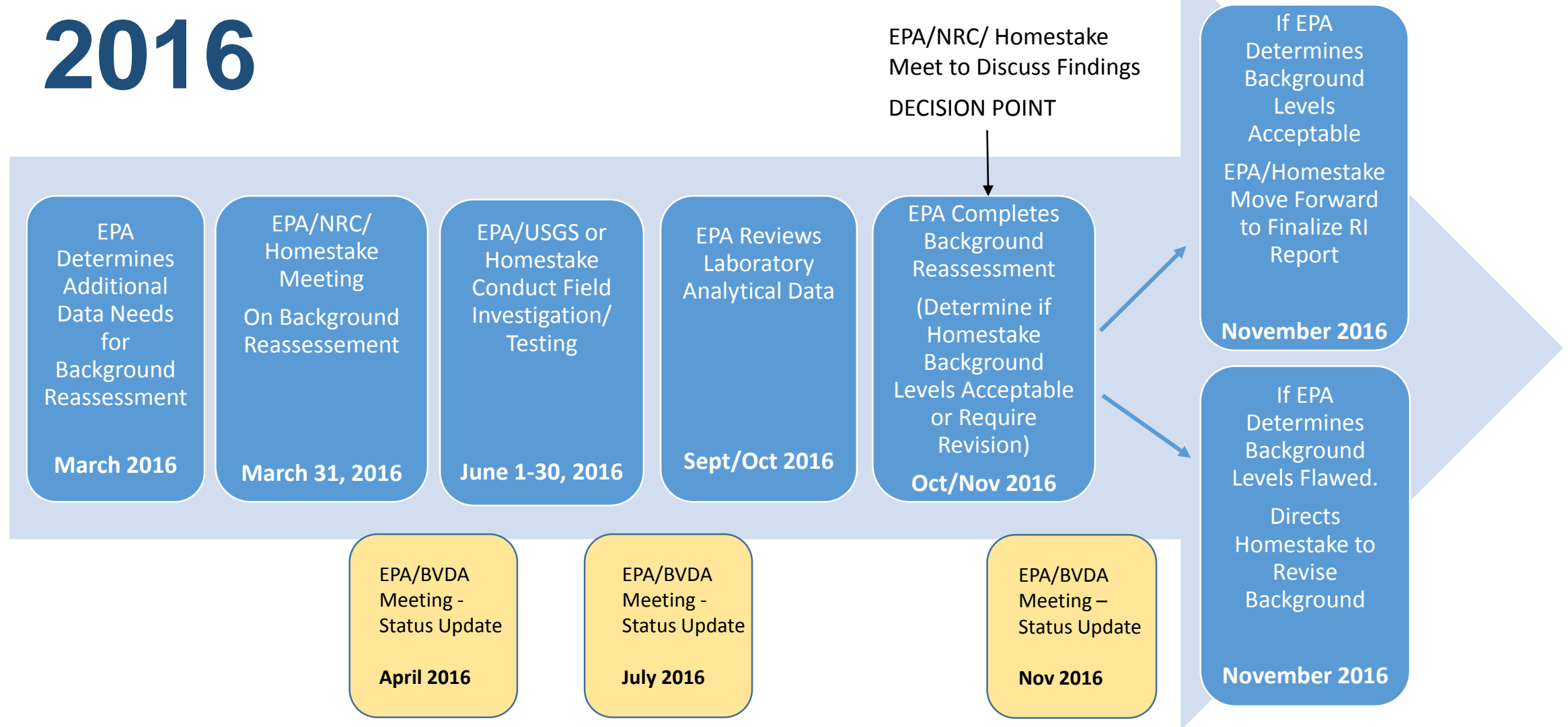
Groundwater Background Re-Assessment

What is EPA's Plan?

- Perform additional testing to identify source of high uranium in some background wells:
 - Uranium Isotopes
 - Age Dating
 - Geophysical surveys

Homestake
*believes
additional
data
unnecessary*

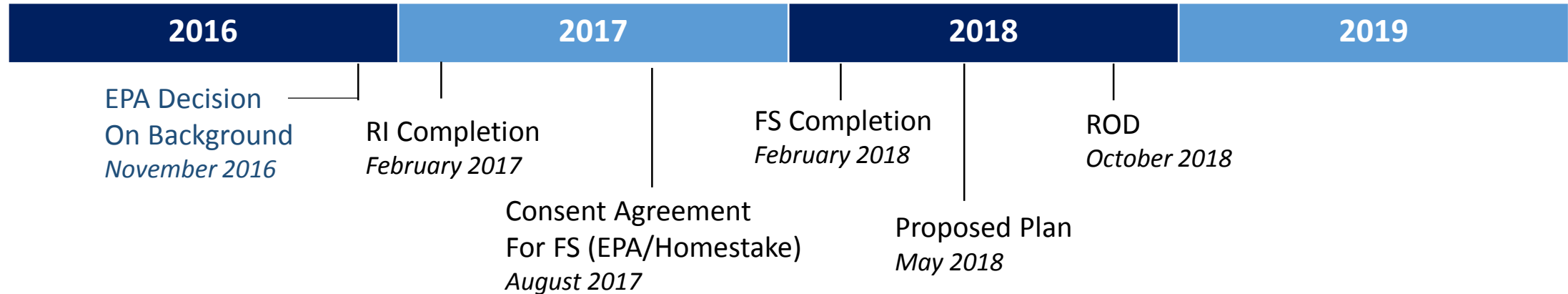
Planned Work and Outreach 2016



Path Forward Schedule

PATH 1

EPA Approves Current Background



PATH 2

EPA Requires Revision to Background



Next Steps

- Technical meeting with Homestake and NRC on March 31, 2016
- Homestake or EPA/USGS collect samples in June 2016
- Meeting with BVDA in April to provide update
- EPA Completes Five-year Review in September